COMPUTER ENGINEERING: SOFTWARE ENGINEERING, BSCP

Requirements for Students Matriculating in or before Academic Year 2025-2026. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 128

Code	Title	Hours
General Education Requirements		
English Composition		
ENGL 1113	Composition I [1]	3
or ENGL 1313	Critical Analysis and Writing I	
ENGL 3323	Technical Writing	3
American History & Government		
Select one of the following:		3
HIST 1103	Survey of American History	
HIST 1483	American History to 1865 (H)	
HIST 1493	American History Since 1865 (DH)	
POLS 1113	American Government	3
Quantitative Thought & Logical Reasoning (Q)		
MATH 2144	Calculus I (Q) (With a grade of "C" or better)	4
MATH 2153	Calculus II (Q) (With a grade of "C" or better)	3
Reasoning in the Natural Sciences (N)		
Must include one Laboratory-Based Inquiry (L) course		
CHEM 1414	General Chemistry for Engineers (LN)	4
or CHEM 1515	Chemistry II (LN)	
PHYS 2014	University Physics I (LN) (With a grade of "C" or better)	4
PHYS 2114	University Physics II (LN) (With a grade of "C" or better)	4
Understanding Humanities-Human Heritage & Cultures (H)		
Courses designated (H)		3
Courses designated (DH)		3
Exploring Society & Human Behavior (S)		
Courses designated (GS)		3
Diversity (D)		
Courses designated (D)		
May be paired with another designated course		
Global Cultural Competency (G)		
Courses designated (G)		
May be paired with another designated course		
Additional General Education		
Additional general education credit hours may be required to meet the total 40-hour minimum of general education credit if courses carry more than one general education designation and can be used to meet multiple general education designation hour requirements above.		
Courses designated (Q), (H), (N), (S), (D), (G), or (F).		0
Hours Subtotal		**40**
College/Departmental Requirements		
UNIV 1111	First Year Seminar (or other approved first year seminar course)	1
Mathematics		
MATH 2233	Differential Equations (With a grade of "C" or better)	3
MATH 2163	Calculus III (With a grade of "C" or better)	3
Engineering Science		
ECEN 3213	Computer Based Systems in Engineering (With a grade of "C" or better)	3
ENSC 2611	Electrical Fabrication Lab (With a grade of "C" or better)	1
Computer Science		
CS 1113	Computer Science I (Q) (With a grade of "C" or better)	3
CS 2351	Unix Programming	1
CS 2433	C/C++ Programming (With a grade of "C" or better)	3
CS 3653	Discrete Mathematics for Computer Science (With a grade of "C" or better)	3
Electrical & Computer Engineering		
ECEN 2233	Fundamentals of Digital Logic Design (With a grade of "C" or better)	3
ECEN 2714	Fundamentals of Electric Circuits (With a grade of "C" or better)	4
Hours Subtotal		**28**
Major Requirements		
Mathematics		
MATH 3013	Linear Algebra (Q) (With a grade of "C" or better)	3
Electrical & Computer Engineering		
ECEN 3314	Electronic Devices and Applications	4
ECEN 3513	Signal Analysis	3
ECEN 3613	Applied Fields and Waves I	3
ECEN 3714	Network Analysis (With a grade of "C" or better)	4
ECEN 4013	Design of Engineering Systems	3
ECEN 4293	Applied Numerical Methods for Python for Electrical Engineers	3
ECEN 4024	Capstone Design	4
ECEN 4213	Embedded Computer Systems Design	3
ECEN 4243	Computer Architecture	3
ECEN 4303	Digital Integrated Circuit Design	3
ECEN 4503	Applications of Probability and Statistics to Random Signals	3
Computer Science		
CS 4323	Design and Implementation of Operating Systems I	3
or ECEN 4283	Computer Networks	
CS 3353	Data Structures and Algorithm Analysis I (With a grade of "C" or better)	3
Industrial Engineering & Management		

IEM 3503	Engineering Economic Analysis	3
Software Engineering Electives		
12 credit hours designated as software engineering courses		12
Hours Subtotal		**60**
Total Hours		**128**

[1]

If a “B” or higher is not earned in ENGL 1113 Composition I or ENGL 1313 Critical Analysis and Writing I, then ENGL 1213 Composition II or ENGL 1413 Critical Analysis and Writing II is also required (per Academic Regulation 3.5 (http://catalog.okstate.edu/university-academic-regulations/)).

Graduation Requirements

1. A minimum GPA of 2.00 Technical GPA. The Technical GPA is calculated from all courses in the curriculum with a prefix belonging to the degree program, or substitutions for these courses.
2. A "C" or better in courses listed above as requiring a "C" or better.
3. The major engineering design experience, capstone course, is satisfied by ECEN 4013 Design of Engineering Systems and ECEN 4024 Capstone Design.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 and 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2031.